

L 22752-66

ACC NR: AP6010111

[Based on author's abstract]

[NT]

SUB CODE: 07, 11/

SUBM DATE: 12Apr65/
OTH REF: 002/

ORIG REF: 002/

Card 2/2 *out*

ALEKSEYEV, Vasilii Dmitriyevich; POPOV, Aleksandr Ivanovich; SIZOV,
Konstantin Pavlovich; SOROKIN, G.Ye., red.; BOBROVA, Ye.N.,
tekhn.red.

[Mechanization of operations for the repair of freight cars]
Mekhanizatsiia rabot pri remonte gruzovykh vagonov. Moskva,
Vses.izdatel'sko-poligr.ob"edinenie M-va putei soobshcheniia,
1960. 268 p. (MIRA 14:4)
(Railroads--Freight cars--Maintenance and repair)

SCROKIN, G.Ye., inzh.

Freight cars of the immediate future. Zhel.dor.transp. 42 no.3:
30-32 Mr '60. (MIRA 13:6)
(Railroads--Freight cars)

AVATKOV, A.S., inzh.; SOROKIN, G.Ye., inzh.

The world's railroads ("Railroads." Reviewed by A.S. Avatkov,
G.E. Sorokin). Zhel.dor.transp. 42 no.4:95-96
Ap '60. (MIRA 13:7)
(Railroads)

SITKOVSKIY, Il'ya Pavlovich; SOROKIN, G.Ye., retsenzents; GURARIY, M.G.,
retsenzents; KOLTUNOVA, M.P., red.; KHITROVA, N.A., tekhn. red.

[Use of plastics for railroad equipment] Plasticheskie massy v
zheleznodorozhnom dele. Moskva, Vses. izdatel'sko-poligr. ob"edi-
nenie M-va putei soobshcheniia, 1961. 180 p. (MIRA 14:11)
(Railroads--Equipment and supplies) (Plastics)

SKIBA, Ivan Fomich, kand. tekhn. nauk; VOLOSTNYKH, D.V., inzh., retsen-
zent; SOROKIN, G.Ye., inzh., red.; KHITROV, P.A., tekhn. red.

[Railroad cars] Vagony. Izd.2., ispr.i dop. Moskva, Vses. izda-
tel'sko-poligr.ob"edinenie M-va putei soobshchenia, 1961. 278 p.
(MIRA 14:12)

(Railroads--Cars)

S/193/61/000/004/007/007
A004/A101

AUTHOR: G. Ye. Sorokin

TITLE: New achievements in railroad car construction

PERIODICAL: Byulleten' tekhniko-ekonomicheskoy informatsii, no. 4, 1961, 64-66

TEXT: In his article the author comments on the achievements of and prospective trends in railroad car construction and points out that the percentage of four-axle and six-axle cars has risen to 75%. The freight cars are equipped with automatic couplers and automatic brakes making it possible to increase considerably the speed and weight of trains. Covered cars, half-cars (poluvagon) and platform cars of 60 tons load capacity with elongated chassis and metallic sides are widely used, as well as tank cars of 50 - 60 m³ capacity, refrigerator trains and sections with mechanical cooling. The author points out, however, that the designs of freight cars are not without defects necessitating premature repairs. Thus, investigations carried out by the Vsesoyuznyy nauchno-issledovatel'skiy institut zheleznodorozhnogo transporta (All-Union Scientific Research Institute of Railroad Transportation) showed that the majority of defects occurred with half-cars, where above all the hatches, the face

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New achievements in railroad car construction

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door flaps, ridge girders, upper braces and body walls are often damaged. The unsatisfactory life of half-car bodies can be explained by the fact that the metallic parts are poorly protected from corrosion. During a life of ten years some 30 tons of metal are required for the repair of half-cars. In connection with the increased train weight, the longitudinal stresses have also considerably risen and attain more than 250 tons during the start of the train. Technological and economic investigations revealed that the maximum economic effect is obtained from six-axle half-cars of 95 - 100 tons loading capacity, four-axle tank cars of 60 m³ and six-axle tank cars with up to 100 m³ holding capacity, covered cars and isothermal cars with an automatic cooling system. With new cars the axle load should not exceed 21 tons while the load per running meter of track should not be higher than 8 tons. The car weight will be considerably reduced on account of utilizing alloyed steel, stamped and bent light alloy sections and artificial and synthetic materials. At the Ural'skiy vagono-stroitel'nyy zavod (Ural Railroad Car Plant) rolled O9T2 (O9G2) alloyed steel is used for the building of car bodies, which resulted in a reduction of the car deadweight by 940 kg. In 1959 and 1960 the railroad car building plants introduced new improved designs and developed a number of car pilot models. Uralvagonzavod fabricated pilot halfcars of 95 tons loading capacity whose deadweight was reduced

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New achievements in railroad car construction

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A004/A101

unloading installation, tank cars with heating system for the transportation of viscous products and tank cars for the transportation of cement with pneumatic unloading. All new cars going to be equipped with automatic brakes with air distributor which will further increase the permissible speed of trains and reduce the longitudinal stresses during braking. The new car types are being fitted with roller bearings, which will contribute to cut down the service personnel, reduce the annual babbit consumption by some 10,000 tons and that of lubricants by some 200, 000 tons. The annual savings will amount to 40 million rubles. The cost for equipping freight cars with roller bearings will be amortized within 3 - 4 years. [Abstractor's note: the remainder of the article has not been abstracted, according to the indication in the request sheet.] ✓

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RAKOV, V.A., inzh.; SOROKIN, G.Ye., inzh.

Provide for a centralized electric power supply of passenger
trains. Zhel.dor.transp. 43 no.8:22-25 Ag '61. (MIRA 14:8)
(Railroads--Electric equipment)

VERKHOVOD'KO, Vladimir Mikhaylovich; PETROV, Vasilii Afanas'yevich;
TUROVTSEV, Vasilii Ivanovich, SOROKIN, G.Ye., inzh., red.;
USENKO, L.A., tekhn. red.

[Organizing the repair of axle boxes with roller bearings; work
of the shop of Communist labor of the repair shop of the Moscow-
Smolensk Station] Organizatsiia remonta buks s rolikovymi pod-
shipnikami; opyt tsekha kommunisticheskogo truda vagonnogo depo
stantsii Moskva-Smolenskaia. Moskva, Transzheldorizdat, 1962. 46 p.
(MIRA 15:6)

(Car axles--Maintenance and repair)

SOROKIN, G.Ye., inzh.

Transportation of containers and semitrailers. Zhel. dor. transp.
46 no.9:89-94 S '64.

BORINSKAYA, Ye.N.; GLUBINA, A.Yu.; MARSHAK, M.S.; SERGEYIYA, M.A.;
SCROKIN, G.Ye.

Dietary regimen for patients with heart failure [with summary in
English] Vop.pit.17 no.2:32-39 Mr-Apr '58. (MIRA 11:4)

1. Iz nauchno-organizatsionnogo otdeleniya (zav. - prof. M.S.
Marshak) Kliniki lechebnogo pitaniya i laboratorii obmena veshchestv
i energii (zav. - prof. O.P.Molchanova) Instituta pitaniya AMN
SSSR, Moskva.

(CONGESTIVE HEART FAILURE, therapy
dietary regimen (Rus))

(DIETS, therapeutic use
congestive heart failure (Rus))

STEPANYAN-TARAKANOVA, A.M.; GOLUBEVA, L.Ya.; ZIKEYEVA, V.K.; KURTSIN', O.Ya.
TIKHOMIROVA, A.N.; MASLENIKOVA, Ye.M.; SOROKIN, G.Ye.;
ZAKHARYCHEVA, A.A.

Effect of combined therapy on patients with the cerebroendocrine
form of obesity. Vop. pit. 18 no. 6:16-24 N-D '59. (MIRA 14:2)

1. Iz Instituta pitaniya AMN SSSR, Moskva.
(CORPULENCE) (GLUTAMATES) (CORTISONE)

SOROKIN, G. Ye. (USSR)

"L'influence de certaines substances alimentaires sur le hemodynamique
chez les malades atteints d'atherosclerose et d'hypertonie"

Paper presented at the Third International Congress of Dietetics,
London, 10-14 July 1961.

SOROKIN, G.Ye.

Effect of animal protein, common salt and restrictive diet (apples)
days on the hemodynamics in hypertension. Vop. pit. 21 no.1:22-29
Ja-F '62. (MIRA 15:2)

1. Iz kliniki lechebnogo pitaniya (zav. - doktor med.nauk L.M.Levitskiy,
Instituta pitaniya AMN SSSR, Moskva.
(HYPERTENSION) (MEAT) (SALT) (APPLE)

SOROKIN, G.Ye.

Determination of the principal hemodynamic factors of systolic volume, peripheral resistance, and elastic stress as a method for estimating the effect of baths. Vop.kur., fizioter. i lech. fiz. kul't. 27 no.1:26-30 '62. (MIRA 15:5)

1. Iz kliniki lechebnogo pitaniya Instituta pitaniya AMN SSSR (dir. - chlen-korrespondent AMN SSSR prof. O.P.Molchanova).
(HYDROTHERAPY) (BLOOD--CIRCULATION)

SOROKIN, I.

Arched cow barns of a new type. Sel'. stroi. 15 no.12:13-14 D '60.
(MIRA 13:12)

1. Upravlyayushchiy trestom "Orenburgsovkhozstroy."
(Dairy barns)

SOROKIN, I., inzh.

Mechanical proportioning of ingredients in the G-1 mixer. Avt.
dor. 25 no.8:25 Ag '62. (MIRA 16:2)
(Proportioning equipment)

SOROKIN, I.

Production of powdered sugar in the Shepetovka Sugar Combine.
Sakh.prom. 37 no.11:54-55 N '63. (MIRA 16:11)

1. Shepetovskiy sakharnyy zavod.

YAKUNIN, N.K., kand.tekhn.nauk; BEKKER, I.G., inzh.; SOROKIN, I.A., inzh.

Sawmills with multiple circular saws for small timber. Der.prom.
8 no.4:16-17 Ap '59. (MIRA 12:6)

1. Tsentral'nyy nauchno-issledovatel'skiy institut mekhanicheskoy
obrabotki drevesiny (for Yakunin). 2. Giprolasmash (for Sorokin).
(Sawmills)

1. SOROKIN, .I A.
 2. USSR (600)
 4. Steam Boilers
 7. Problems of constructing vertical and cylindrical boilers of small capacity, Prom. ener., 10, No. 4, 1953.
9. Monthly List of Russian Accessions, Library of Congress, April, 1953, Uncl.

SOROKIN, Igor' Aleksandrovich

[Raising potatoes with high yields; the Stalin Collective Farm in Prigorod District] Opyt vyrashchivaniia vysokikh urosheev kartofelia; kolkhoz imeni Stalina, Prigorodnogo raiona. Ordzhonikidze, Severo-Osetinskoe knizhnoe izd-vo, 1960. 11 p. (MIRA 14:8)
(Prigorod District--Potatoes)

SORKIN, I.E., prof.; LEVITIN, F.I., prof., red.

[Tuberculous meningitis] Tuberkuleznyy meningit. Pod red.
F.I.Levitina. Moskva, TSentr. in-t usovershenstvovaniia
vrachey, 1959. 174 p. (MIRA 13:3)
(TUBERCULOUS MENINGITIS)

SOROKIN, I.G., red.; LESHAKOV, I.T., tekhn.red.

[Economy of Kursk Province; statistical collection] Narodnoe
khoziaistvo Kurskoi oblasti; statisticheskii sbornik. Ored,
Gosstatizdat, 1960. 138 p. (MIRA 14:5)

1. Kursk (Province) Statisticheskoye upravleniye. 2. Nachal'-
nik statisticheskogo upravleniya Kurskoi oblasti (for Sorokin)
(Kursk Province--Statistics)

SLAVUTSKIY, Aleksandr Kel'manovich, kand. tekhn. nauk, dots.;
YELENOVICH, Aleksey Savel'yevich, kand. tekhn. nauk,
dots.; KURDENKOV, Boris Ivanovich, inzh.; ROMADANOV,
Georgiy Afanas'yevich, kand. tekhn. nauk; Prinimali
uchastiye: BRYKALOV, I.I., inzh.; MASHIN, K.P., inzh.;
~~SOROKIN, I.G., inzh.~~; SHCHERBAKOV, Ye.I., inzh.;
IL'INA, L.N., red.

[Road toppings made of local materials] Dorozhnye ~~odestdy~~
iz mestnykh materialov. Moskva, Transport, 1965. 270 p.
(MIRA 18:7)

AUTHOR: Sorokin, I.I. (Engineer)

100-4-10/16

TITLE: The use of trailers. (Primeneniye pritsepnykh i navesnykh mekhanizmov).

PERIODICAL: "Mekhanizatsiya Stroitel'stva" (Mechanisation of Construction), 1957, Vol.14, No.4, p.24 (USSR).

ABSTRACT: Criticism of the article by G.V. Reshchikov, Engineer, "Use of Bulldozers, Scrapers and Excavators for the Construction of Waterworks" (Kompleksnoye primeneniye bul'-dozerov, skreperov i ekskavatorov na stroitel'stve kollek-torno-vodosbornoy i sbrosnoy setey). The author recommends various methods of excavation with trailer-excavators which allow quick handling and mobility. The exclusion of tractors resulted in lowering of costs. In 1955 this was tested during irrigation works in Kirgiz. 43% of the total excavation work was carried out by bulldozers and 57% by excavators. A 19.75% saving was achieved when the above method was used. It is suitable when small areas are to be excavated.

1/1

AVAILABLE:

COMMON ELEMENTS		COMMON VARIABLE	
<p>Hydrogenation of phenols. O. L. JUCHOVSKI and I. L. KOSMAN (Ukrain. Chem. J., 1931, 6, [Tech.], 169-174). 80% yield of 98.7% cyclohexanol am obtained by the hydrogenation of pure PhOH at 170° and 6-70 atm. pressure of H₂ in the presence of a catalyst prepared by reducing NiCO, or a mixture of NiCO, CoCO₃, and CuCO₃ pptd. on kieselguhr. All reagents should be free of even traces of S, As, P, or other catalyst poisons. Equally good results are obtained with o-, m-, and p-cresol under analogous conditions. The above reaction does not proceed with crude or purified coal-tar PhOH or its homologues, probably owing to the presence of difficulty eliminable S compounds. PhOH in the absence of a catalyst does not react with H₂ at < 375° at 680° and 6-70 atm. it gives 60% yield of C₆H₁₂ and H₂O. Equally good yields of low-b.p. aromatic hydrocarbons are obtained using crude coal-tar PhOH, whilst using low-temp. tar containing 27% of phenols less than half of the original phenol content is recovered as liquid hydrocarbons, the remainder being converted into saturated gaseous hydrocarbons. Under similar conditions guaiacol is converted into H₂O and gaseous paraffin hydrocarbons. R. TRUSKOWSKI.</p>			
<p>ASB.SLA METALLURGICAL LITERATURE CLASSIFICATION</p>			
<p>FROM SYNDICATE</p>		<p>FROM BOWLING</p>	
<p>1930 1931 1932 1933 1934 1935 1936 1937 1938 1939 1940 1941 1942 1943 1944 1945 1946 1947 1948 1949 1950 1951 1952 1953 1954 1955 1956 1957 1958 1959 1960 1961 1962 1963 1964 1965 1966 1967 1968 1969 1970 1971 1972 1973 1974 1975 1976 1977 1978 1979 1980 1981 1982 1983 1984 1985 1986 1987 1988 1989 1990 1991 1992 1993 1994 1995 1996 1997 1998 1999 2000</p>		<p>1930 1931 1932 1933 1934 1935 1936 1937 1938 1939 1940 1941 1942 1943 1944 1945 1946 1947 1948 1949 1950 1951 1952 1953 1954 1955 1956 1957 1958 1959 1960 1961 1962 1963 1964 1965 1966 1967 1968 1969 1970 1971 1972 1973 1974 1975 1976 1977 1978 1979 1980 1981 1982 1983 1984 1985 1986 1987 1988 1989 1990 1991 1992 1993 1994 1995 1996 1997 1998 1999 2000</p>	

1ST AND 2ND ORDERS		PROCESSING AND PROPERTIES		3RD AND 4TH ORDERS	
<p>Hydrogenation of phenols. G. L. YUKHIMOVICH AND I. I. SUBORIN. <i>Ukrain. Khim. Zhur. & Wiss.-Tech. Tell.</i> 159-74(1932).—A detailed report of expts. on the hydrogenation of phenols. As a catalyst was used Ni freshly reduced by H₂ from NiCO₃ and used in amts. of 0.5% of phenol employed. Reaction starts at 100-20°, and at 170-80° and 15-20 atm. 100 g. absorb 0.7 l. H₂ per min. The product, hexalin, m. 17-8°, boiling showed 98.7% hexalin. This method, however, gives too low results unless the required acetylation is done by heating a 1-1.5 g. sample with 20 cc. of a mixt. of Ac₂O and pyridine in a small flask with a reflux condenser. From o-, m-, and p-cresols products were obtained that were 98.7, 98.1, 99.2% pure and b. 168-70°, 173-5°, 173-4°, resp. Substitution of a mixed catalyst of Ni, Co and with a small amt. of Cu for the Ni catalyst acts beneficially on the process. Only cryst. phenol can be used; com. phenol must be carefully freed from S impurities. High temps. up to 550° do not accelerate the reaction; the same is true of high pressures. Technical phenols were transformed to the extent of 26% into hydrocarbons of the methane series by heating at 500° under 0 atm. and higher.</p> <p style="text-align: right;">J. G. TOLPIN</p>					
<p>ASB-5LA METALLURGICAL LITERATURE CLASSIFICATION</p>					
<p>627380 #1</p>					
<p>627380 #1</p>					

PRECEDENCE AND PRIORITY INDEX																										IPC AND AIN CODES																									
1ST AND 2ND PRIORITIES													3RD AND 4TH PRIORITIES													5TH AND 6TH PRIORITIES													7TH AND 8TH PRIORITIES												
1ST AND 2ND PRIORITIES													3RD AND 4TH PRIORITIES													5TH AND 6TH PRIORITIES													7TH AND 8TH PRIORITIES												
<p>Hydrogenation of rapeseed oil in the Slavyanskil plant No. 17/ I. I. Sorokin, N. A. Ivanova and P. K. Bogush. <i>Novye i Prilozheniya Hidrogenizatsii Zhirov, Sbornik Vsesoyuz. Nauch. Issledovatel. Inst. Zhirov 1939, 46-8; Khim. Referat. Zhur. 1940, No. 3, 119.</i>—The refining of rapeseed oil with H_2SO_4, deodorization at high temp. and air blowing were not effective. Best results are obtained by hydration, removal of the sediment, heating to 80-85°, neutralization with alkali of 28-30°Bé. in 150% excess, removal of soap stock, blowing with steam and drying with infusorial earth. Hydrogenation in autoclaves was carried out with a fresh catalyst (0.17-0.20%). The catalyst was added in 2 portions. W. R. Henn</p>																																																			
<p>ASAC-SLA METALLURGICAL LITERATURE CLASSIFICATION</p>																																																			
<p>1ST AND 2ND PRIORITIES</p>																																																			
<p>3RD AND 4TH PRIORITIES</p>																																																			
<p>5TH AND 6TH PRIORITIES</p>																																																			
<p>7TH AND 8TH PRIORITIES</p>																																																			

LIST AND INDEX		PROCESSING AND PROPERTIES INDEX	
<p>21</p> <p>Hydrogenation of fats with nickel catalyst obtained through the bicarbonate. I. I. Surokin, N. A. Ivanova and B. M. Mal'tseva. <i>Novos i Praktiki Hidrogenizatsii Zhirov, Sbornik Vsesoyuz. Nauch.-Issledovatel. Inst. Zhirov</i> (Leningrad) 1960, 106-7; <i>Khim. Referat. Zhur.</i> 1960, No. 4, 100-10.—In the Slavyanskii hydrogenation plant there is added to the catalyst prepd. from $\text{Ni}(\text{HCO}_3)_2$ approx. 20% of the less-expensive Ni catalyst obtained by treating NiSO_4 soln. with NaHCO_3. NiCO_3 is pptd. at 40°, mixed for 3-4 hrs., filtered, the ppt. washed and dried at $60-70^\circ$ in a drying oven. The dry, ground NiCO_3 powder is placed in a vessel with oil and the reduction carried out with H at $245-30^\circ$ for 3-4 hrs. W. R. H.</p>		<p>21</p>	
<p>ASB-SLA METALLURGICAL LITERATURE CLASSIFICATION</p>			
<p>GROUPS</p>		<p>RELATIONS</p>	
<p>1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100</p>		<p>1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100</p>	

SOROKIN, I.I.

Preventing the throwing off of fat from hydrogenators. Masl.-
zhir.prom. 21 no.1:33 '56. (MLRA 9:6)

1.Slavyanskiy maslozhirkombinat.
(Hydrogenation) (Oils and fats)

SOROKIN, I.M.

Unusual observation on gastric phlegmon. Khirurgiia no.3:74 Mr '54.
(MLRA 7:5)

1. Glavnyy vrach khirurgicheskogo otdeleniya Mozhginskoy rayonnoy
bol'nitsy.

(PHLEGMON,

*stomach, in pregn., differ. diag. & surg.)

(STOMACH, diseases,

*phlegmon in pregn., differ. diag. & surg.)

(PREGNANCY, complications,

*stomach phlegmon, differ. diag. & surg.)

SOROKIN, Iosif Markovich; YENYUTIN, V.V., red.; SHIROKOVA, M.M.,
tekh. red.

[Fundamentals of radio measurement techniques] Osnovy radio-
izmeritel'noi tekhniki. Moskva, Gosenergoizdat, 1962. 279 p.
(MIRA 15:8)

(Radio measurements) (Electronic measurements)

SOROYIN, I.N.

Silting of small water bodies between the rivers Khoper and Medveditsa.
Trudy Lab. ozeroved. 7:37-39 '58. (MIRA 11:10)

1. Laboratoriya ozerovedeniya AN SSSR.
(Khoper Valley--Silt) (Medveditsa Valley--Silt)

SOROKIN, I.N.

Study of pond silting the upper section of the Buzuluk Basin. Trudy
Lab. ozeroved. 9:128-149 '60. (MIRA 13:8)
(Reservoir sedimentation)
(Buzuluk Valley (Stalingrad Province)—Farm ponds)

SOROKIN, I.N.; YAKOVLEVA, L.V.

Pond silting. Trudy Lab. ozeroved. 10:160-166 '60.

(MIRA 14:6)

(Reservoir sedimentation)

SEKUCHIN, I.N.

Water balance of small reservoirs in Kursk Province as exemplified
by Borshchen' and Berezovyy Reservoirs. Trudy Lab. ozeroved.
13:56-102 '61. (MIRA 14:10)

(Borshchen' Reservoir--Hydrology)
(Berezovyy Reservoir--Hydrology)

SONOKIN, I.N.; YANOVLEV, L.V.

Some results of examining the sedimentation degree of reservoirs
in the southwestern part of Kursk Province. Trudy Lab.
ozeroved. 13:222-246 '61. (MIRA 14:10)
(Kursk Province--Reservoir sedimentation)

SOROKIN, Igor' Nikolayevich; SAPAROVSKIY, Sergey Vladimirovich;
RAZUMIKHIN, M.I., prof., red. ; MIKHEYEV, N.I., red.

[Using vibration techniques in stretching sheet materials]
Obtiazhka listovykh materialov s primeneniem vibratsii.
Kuibyshev, Kuibyshevskoe knizhnoe izd-vo, 1964. 66 p.
(MIRA 18:3)

L 26272-66 EWP(k)/EWT(m)/EWA(d)/EWP(t) IJP(c) JH/JD/HW
ACC NR: AP6012612 SOURCE CODE: UR/0182/66/000/004/0023/0024

AUTHOR: Sorokin, I. N.; Saparovskiy, S. V.; Smelyakov, Ye. P.; Shil'meyster, B. D.

ORG: none

TITLE: Stretch forming of metal sheets with vibrations

SOURCE: Kuznechno-shtampovoye proizvodstvo, no. 4, 1966, 23-24

TOPIC TAGS: metal forming, sheet forming, stretch forming, vibration forming

ABSTRACT: The effect of vibration in stretch forming has been investigated in forming D16AM aluminum alloy sheets (200 x 300 x 1 mm). Vibrations were applied either perpendicular to or in the direction of the stretching pressure. Perpendicular vibrations with a force of 110—355 kg, a frequency of 45—70 Hz, and an amplitude of 0.3—0.8 mm increased considerably the relative deformation at the same stretching pressure. The relative deformations achieved in the first four stretch forming steps were 7.0, 12.5, 15.5, and 17.0% without vibration and 11.0, 17.5, 15.5, and 26.0 with vibration. Vibration in the direction of stretching pressure at a frequency of 20—30 Hz and an amplitude of 0.09—0.22 mm had a similar effect. It increased the relative deformation in five steps from 7.5, 9.5, 12.0, 14.0, and 16.0% to 13.5, 16.0, 20.0, 24.0, and 27.0%. Thus, vibration increases the relative deformation and makes it possible to achieve the desired shape in fewer steps or to use a lower pressure to achieve the same relative deformation compared to

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UDC: 621.98.043

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ACC NR: AP6012612

conventional stretch forming without vibration. Vibrations applied simultaneously in both directions reduce the stretching pressure by 30% and increase the relative deformation from 22.5 to 33.0%. Orig. art. has: 1 figure and 4 tables. [WW]

SUB CODE: 13/ SUBM DATE: none/ ORIG REF: 001/ ATD PRESS: 4243

Card 2/2 . CC

ACC NR: AR7004886

SOURCE CODE: UR/0276/66/000/009/V032/V032

AUTHOR: Sorokin, I. N.; Shil'meyster, B. D.; Grebennikov, O. P.

TITLE: Test data on vibration wrapping of sheets

SOURCE: Ref. zh. Tekhnologiya mashinostroyeniya, Abs. 9V236

REF SOURCE: Tr. Kafedry proiz-va letatel'n. apparatov. Kuybyshevsk. aviats. in-t, vyp. 20, ch. 2, 1965, 75-83

TOPIC TAGS: sheet metal, vibration analysis, metal test, material deformation, vibration wrapping

ABSTRACT: Conditions for modernizing wrapping presses were analyzed for the purpose of using vibrational forming of blanks at the final stage of wrapping. A laboratory setup was developed for wrap-forming vibration. According to the results obtained from tests on the experimental setup, it was determined that the combination of static and vibrational methods of application of force in forming a specimen reduces the number of transitory stages by 25—30%. The deformation resistance of metal is reduced and the area of uniform deformations is slightly increased. The

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UDC: 621.981.011

SOROKIN, I. P.

137-1957-12-23044

Translation from: Referativnyy zhurnal, Metallurgiya, 1957, Nr 12, p 25 (USSR)

AUTHOR: Sorokin, I. P.

TITLE: Developing New Ways of Concentrating Sands (K voprosu
o putyakh razvitiya obogashcheniya peskov)

PERIODICAL: Kolyma, 1954, Nr 3, pp 30-32

ABSTRACT: Bibliographic entry

1. Sands-Concentrating methods
2. Bibliography

Card 1/1

Sorokin, I. P.

137-1957-12-23440

Translation from: Referativnyy zhurnal, Metallurgiya, 1957, Nr 12, p 87 (USSR)

AUTHOR: Sorokin, I. P.

TITLE: The Amalgamation of Ore Slimes (Amal'gamatsiya shlikhov)

PERIODICAL: Kolyma, 1954, Nr 6, pp 16-19

ABSTRACT: Practices in the amalgamation of magnetite-, siderite-, and hematite-containing ore slimes, as well as wastes and blow-offs.
B. Z.

1. Ore slimes-Amalgamation methods

Card 1/1

SOROKIN, I. P.

137-1957-12-23048

Translation from: Referativnyy zhurnal, Metallurgiya, 1957, Nr 12, p 26 (USSR)

AUTHORS: Sorokin, I. P., Poltavtseva, T. S.

TITLE: On the Operation of Native-Metal Sluice-Box Traps (O rabote shlyuzovykh samorodkouloviteley)

PERIODICAL: Kolyma, 1955, Nr 12, pp 16-19

ABSTRACT: A presentation of data on the collection of large particles of metal in ore washers of the MPD-4(I) and MPD-5(II) types which were used in the treatment of the sands of a given polygon. In unit I the entire mass of the sand passes first through the short sluice of the native metal separator (OI) and is then subjected to disintegration and sifting. In unit II the sand is first subjected to disintegration and three-stage screening and only then enters the OI. The placement of the sluice OI, in unit I, at the beginning of the process offers considerable advantages in comparison with the OI of the unit II. It has been established that, in the case of sands of large or medium permeability, the OI should be placed at the beginning of the process, while for washing dense clay sands the arrangement of the unit II is more expedient. To

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137-1957-12-23048

On the Operation of Native-Metal Sluice-Box Traps

render the collection of native metal complete, when washing sands containing large particles of native metal the employment of electrical OI's is the most effective method. It has been concluded that the sluice OI in an ore washer not only collects the large native metal pieces, but also assists in the collection of the small and medium ones.

M. L.

1. Separators-Operation

Card 2/2

SOROKIN, I. P.

137-1957-12-23046

Translation from: Referativnyy zhurnal, Metallurgiya, 1957, Nr 12, p 26 (USSR)

AUTHORS: Poltavtseva, T. S., Sorokin, I. P.

TITLE: Some Results of the Operation of Metallic Washing Equipment in 1955 (Nekotoryye itogi raboty metallicheskih promyvochnykh priborov v 1955 godu)

PERIODICAL: Kolyma, 1956, Nr 3, pp 14-19

ABSTRACT: A summary of the technical characteristics of five MPD type installations for the washing of gravel, employed in the enterprises of Dal'stroy. The peculiarities of the technical arrangement are shown, and the necessity for a concentrate-transporting unit is pointed out, as well as the need for the installation of equipment for continuous or periodic sampling. The results of the investigation of several installations, and productivity indices are given. Methods for their improvement are proposed.

I. M.

1. Metallic washing equipment-Operation

Card 1/1

SOV/137-58-12-24291

Translation from: Referativnyy zhurnal. Metallurgiya, 1958, Nr 12, p 52 (USSR)

AUTHOR: Sorokin, I. P.

TITLE: Gold Recovery From the Carbonaceous Ores of the Pavlik Deposit
(Izvlecheniye zolota iz ugliстой rudy mestorozhdeniya Pavlik)

PERIODICAL: Tr. Vses. Magadansk. n.-t. in-ta--l M-va tsvetn. metallurgii
SSSR, 1956, section 4, Nr 12, 12 pp, ill.

ABSTRACT: Studies of Pavlik-deposit ore samples have established that this ore contains both coarse Au (grains up to 5x6 mm) and very fine gold (3-5 microns). The ore cannot be directly subjected to cyanidation because of the presence of carbonaceous matter of high adsorptive capacity. The presence of films also hampers cyanidation. A test is made of the influence of surface-active materials (pitch, petroleum, soap) or oxidizers (O_2 , $H_2 O_2$, $Na_2 O_2$, chloride of lime, etc.) upon the processing of the comminuted ore. The Au-complex adsorbed by the carbonaceous matter from the cyanide solution is only partially washed out with water, but to a substantial degree when a Na sulfide solution is used. Despite the rise in Au extration in the preliminary processing of the ore by oxidizers and surface-active substances and

Card 1/2

SOV/137-58-12-24291

Gold Recovery From the Carbonaceous Ores of the Pavlik Deposit

by washing out of the Au complex by Na_2S , it proved impossible to attain the desired results. The ore-treatment flowsheet is presented. Bibliography: 20 references.

V. S.

Card 2/2

SOV/137-58-10-20711

Translation from: Referativnyy zhurnal, Metallurgiya, 1958, Nr 10, p 53 (USSR)

AUTHORS: Pap, A.M., Sorokin, I.P.

TITLE: Extraction of Gold From Pyrite at the Malyy At-Uryakh River
Placer (Iz vlecheniye zolota iz pirita rossypi r. Malyy At-
Uryakh)

PERIODICAL: Tr. Vses. Magadansk. n.-i. in-ta—I M-va tsvetn. metal-
lurgii SSSR, 1956, division 4, Nr 13, 10 pp

ABSTRACT: Preliminary investigations are conducted showing the pyrite
at the Malyy At-Uryakh River placer to be auriferous. The Au
can be recovered by comminution followed by amalgamation
and cyanidation. Bibliography: 7 references.

V.S.

1. Gold ores--Processing
2. Gold--Separation

Card 1/1

Sorokin, I. P.

137-58-5-8744

Translation from: Referativnyy zhurnal, Metallurgiya, 1958, Nr 5, p 3 (USSR)

AUTHOR: Sorokin, I. P.

TITLE: Concentration Tests Performed on Gold-bearing Ore from Parallel Zones of the im. Matrosov Mine and Development of a Technology for its Concentration (Issledovaniye na obogatimost' i razrabotka tekhnologicheskoy skhemy obogashcheniya zolotodorzhashchey rudy parallel'nykh zon rudnika im. Matrosova)

PERIODICAL: Tr. Vses. Magadansk. n.-i. in-ta za 1956 g. Magadan, 1957, pp 110-117

ABSTRACT: It has been established, in the course of the investigation, that ores from the parallel zones differ very little from each other and from the principal reference zone. The ore minerals are represented by Au and by a group of sulfides, while the rock-forming elements are represented by quartz, feldspar, sericite, chlorite, carbon substances, and others. Three processing methods are recommended: 1) crushing of the ore to -6 mm and -3 mm at a temperature of 650-700°C, grinding to -0.1 mm. and cyaniding in accordance with the complete mud extraction process. 96-97 percent of Au is extracted in this manner; 2) after crushing

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137-58-5-8744

Concentration Tests Performed on Gold-bearing Ore (cont.)

the ore to -10 mm, it is ground in two stages to -0.3 mm and -0.15 mm under concurrent jigging within the closed grinding cycle; this is followed by refining of concentrates on a concentrating table, flotation of Au from the tailings of gravitational concentration, internal amalgamation of gravitational concentrates, and, finally, cyanidation of the amalgamation tailings and of the flotation concentrates. Total extraction of Au into the amalgam and into the solution varies between 85 percent and 87 percent; 3) preparation and concentration processes, identical to those employed in the second method, followed by a process of roasting of the flotation concentrates and of the tailings from internal amalgamation of gravitational concentrates with subsequent cyanidation of the additionally ground sinter. Total extraction is equivalent to 92 percent.

A. Sh.

1. Gold ores--Processing

Card 2/2

137-58-6-11939

Translation from: Referativnyy zhurnal, Metallurgiya, 1958, Nr 6, p 108 (USSR)

AUTHOR: Sorokin, I.P.

TITLE: Industrial Tests of Pyrometallurgical Treatments of "Sweeps" from Mine Strongrooms (Promyshlennyye ispytaniya piro-metallurgicheskoy obrabotki kassovykh otduvov)

PERIODICAL: Tr. Vses. Magadansk. n.-i. in-ta za 1956 g. Magadan, 1957, pp 126-132

ABSTRACT: The Au in "sweeps" produced in the treatment of the crude metal delivered to placer strongrooms is in the form of pure or Fe-oxide-film-covered gold dust particles and concretions with quartz or sulfides. A method has been tested of smelting these products. It consists of roasting, grinding, smelting in graphite crucibles at 1200-1300°C to form an Fe-Na slag (with added soda and quartz), and washing of the slag by a Pb "rain" produced by charging a mixture of PbO and reductant into the fused slag. Extraction of Au on smelting attains 99.9%, while upon amalgamation, the procedure normally employed to treat the "sweeps", recovery is 91-95%.

Card 1/1

1. Gold--Processing 2. Gold Recovery

L.P.

137-1958-1-99

Translation from: Referativnyy zhurnal, Metallurgiya, 1958, Nr 1, p 16 (USSR)

AUTHORS: Pap, A. M., Sorokin, I. P.

TITLE: Secondary Minerals in Placers and the Possibilities of Extracting Them (Mineraly-sputniki v rossypanyakh i vozmozhnosti ikh izvlecheniya)

PERIODICAL: Kolyma, 1957, Nr 2, pp 12-16

ABSTRACT: A description of the occurrence of certain accessory minerals (cassiterite, scheelite, pyrite, wolframites) in gold and tin placers is presented on the basis of data obtained from the study of concentrate samples. The possibility of their recovery is defined.

A. Sh.

1. Ores--Separation 2. Mining industry--USSR

Card 1/1

Sorokin, I. P.

137-1958-2-2602

Translation from: Referativnyy zhurnal, Metallurgiya, 1958, Nr 2, p 56 (USSR)

AUTHOR: Sorokin, I. P.

TITLE: The Effect of Lime on the Dissolution Rate of Gold in Cyanide Solutions (Vliyaniye izvesti na skorost' rastvoreniya zolota v tsianistyx rastvorakh)

PERIODICAL: Kolyma, 1957, Nr 3, pp 25-29

ABSTRACT: Experiments were conducted both on specially prepared Au alloys and on crude ores. In cyanide solutions containing no lime, as compared with alkali solutions, the dissolution rate both of pure Au and of its binary and ternary alloys attained its maximum. In the case of the binary alloys the dissolution rate increased in proportion to the increase in the Au content. The dissolution rate of pure Au was twice that of pure Ag. High-grade ternary Au alloys had a dissolution rate almost equal to that of pure Au. With the introduction of CaC (0-0.025) percent) the dissolution rate of Au dropped by appx. 30 percent. When the CaO content was 0.05 - 0.06 percent, the dissolution rate underwent practically no change. The dissolution rate of alloys with a preponderance of Ag, also that of pure Ag, dropped considerably in the presence

Card 1/2

137-1958-2-2602

The Effect of Lime on the Dissolution Rate of Gold in Cyanide Solutions

of a small CaO concentration. When under factory conditions of cyanidation the solutions were strengthened with alkali, this slowed down sharply the Au dissolution reaction. The most intense passivating action of the process is to be observed during the grinding cycle and in the first agitator into which milk of lime was fed. When ores with a minimum concentration of free alkali were cyanated in an 0.01 - 0.02 percent CaO solution, the pulp stirring operation could be completed in 12 hours (instead of 24). This made possible a substantial increase in the output capacity of the plant.

G. S.

1. Gold alloys--Solubility
2. Cyanide solutions--Applications
3. Lime--Effectiveness

Card 2/2

SECRET
MATSUYEV, L.P., inzhener; SOROKIN, I.P., inzhener.

Washing apparatus for the preparation of sands at the Far Eastern C
Construction Administration. Gor.zhur. no.6:48-52 Je '57.
(MLRA 10:8)

(Sand--Cleaning) (Soviet Far East--Ore dressing)

FOMENKO, T.G.; SOROKIN, I.P.

Loosening of materials in the jigging process. Izv. vys.
ucheb. zav.; tsvet. met. 3 no.3:45-48 '60. (MIRA 14:3)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut zolota i
redkikh metallov. Rekomendovana kafedroy obogashcheniya poleznykh
iskopayemykh Krasnoyarskogo instituta tsvetnykh metallov.
(Ore dressing)

SADOVSKIY, V.D.; BOGACHEVA, G.N.; SMIRNOV, L.V.; SOROKIN, I.P.; KOMPANEYTSYEV,
N.A.

Investigating phase recrystallization in titanium. Fiz. met. i
metalloved. 10 no.3:397-403 S '60. (MIRA 13:10)

1. Institut fiziki metallov AN SSSR.
(Titanium--Metallography)
(Phase rule and equilibrium)

SOROKIN, I.P.

Dynamics of the drive of a ring-type main working part. Nauch.
soob. IGD 12:204-212 '61. (MIRA 15:9)
(Mining machinery--Electric driving)

SOROKIN, I.P., kand.tekhn.nauk

Gyroscopic effect in mining machines. Mekh. i avtom. v gor. prom.
no.3:123-128 '63. (MIRA 16:10)

ACCESSION NR: AP4017373

S/0126/64/017/002/0315/0317

AUTHORS: Sokolov, B. K.; Sorokin, I. P.; Stregulin, A. I.

TITLE: Effect of plastic deformation on phase transformations

SOURCE: Fizika metallov i metallovedeniye, v. 17, no. 2, 1964, 315-317

TOPIC TAGS: steel, austenite formation, plastic deformation, phase transformation, iron alloy, nickel alloy, diffusion process

ABSTRACT: The authors studied the effect of plastic deformation on phase transformations in iron-nickel alloys during heating. The samples contained 9, 12, 18 and 27.6% Ni. The carbon content of such alloys did not exceed 0.04%. The samples were annealed at 1200C for 6 hours and cooled in liquid nitrogen in order to obtain maximum martensite formation. Some of the samples were rolled (24-28%) at room temperature. Dilatometer curves were obtained during the heating of the formed and of the non-deformed samples at the rate of 8 degrees per minute. The temperature (indicating the beginning of austenite formation) T_B was determined from these curves. In the alloys with 9 and 12% Ni the preliminary deformation lowered T_B by 50 to 40 degrees but did not affect the critical point position in

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ACCESSION NR: AP4017373

the alloy with 18% Ni. In the 27.6% Ni sample the temperature of austenite formation in the formed samples was 40 degrees higher than that in the non-deformed samples. The authors conclude that under the conditions described the phase transformations in the low Ni alloys were determined by diffusive processes. "The authors consider it their duty to express their appreciation to M. I. Oleynik and L. A. Mel'nikov for their help in some of the experiments." Orig. art. has: 4 figures.

ASSOCIATION: Institut fiziki metallov AN SSSR (Institute of Physics of Metals, AN SSSR)

SUBMITTED: 30Jul63

ENCL: 00

SUB CODE: MM

NO REF SOV: 007

OTHER: 001

Card 2/2

L 42957-66 EWT(m)/EWP(t)/ETI IJP(c) JD
ACC NR: AR6024993 SOURCE CODE: UR/0081/66/000/007/L013/L014

AUTHOR: Sorokin, I. P.; Stremilova, N. N. 23
B

TITLE: Study of the rate of dissolution of germanium in hydrochloric acid solutions of ferric chloride 21

SOURCE: Ref. zh. Khimiya, Part II, Abs. 7L112

REF SOURCE: Khim. tekhnologiya. Resp. mezhved. nauchno-tekhn. sb., vyp. 2, 1965, 72-77

TOPIC TAGS: germanium semiconductor, solution kinetics, hydrochloric acid, chloride 17

ABSTRACT: The dissolution rate of Ge in aqueous and hydrochloric acid solutions of FeCl_3 was studied as a function of the temperature and concentration of the oxidant and solvent. An increase in the FeCl_3 concentration in 8.7 N HCl increases the dissolution rate of Ge. In solutions of constant FeCl_3 concentration and variable concentration of free HCl, the dissolution rate of Ge has a maximum corresponding to an acid concentration of ~ 5 N HCl. Both an increase in HCl concentration and its decrease from 5 N HCl cause a sharp decrease in the dissolution rate of Ge; this is due to a decrease in the solubility of the reaction products. The amount of reacted Ge varies in stoichiometric proportion to the amount of reduced FeCl_2 ; this proves that the proposed reaction mechanism, in which FeCl_3 acts as an oxidant, is correct. The high activation energy ($E > 14$ kcal/mole) and the lack of the influence of stirring on the

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L 42957-66

ACC NR: AR6024993

dissolution rate of Ge show that the rate of Ge dissolution is determined by the rate of the heterogeneous reaction taking place at the phase boundary. An acceleration of the dissolution of Ge in HCl is achieved when two or several oxidants are present in the hydrochloric acid solutions. Thus, for example, the simultaneous introduction of FeCl_3 and HNO_3 into the HCl solution increases the average dissolution rate of semiconductor Ge many times. From authors' abstract. [Translation of abstract]

SUB CODE: 07, 20/

Card

2/2

L 63529-65 EPF(n)-2/ENT(m)/ENP(b)/ENP(t) Pu-4 IJP(c) WW/JD/JG

ACCESSION NR: AP5016347

UR/0149/65/000/002/0096/0100

669.293

AUTHOR: Sorokin, I. P.; Kol'tsov, Yu. I.; Sergiyenko, T. V.; Petrik, L. S.

TITLE: Recovery of niobium from bulk zirconium-pyrochlore concentrates

SOURCE: IVUZ. Tsvetnaya metallurgiya, no. 2, 1965, 96-100

TOPIC TAGS: niobium, zirconium, pyrochlore, ore treatment

ABSTRACT: For the utilization of abundant zirconium-pyrochlore ores, four chemical separation processes were investigated, namely, sulfuric acid leaching of concentrates, sulfatization, leaching of concentrates with hydrofluoric acid, and low-temperature chlorination. The bulk concentrates used were obtained by flotation and contained 5-7% Nb₂O₅ + Ta₂O₅ and 12-40% ZrO₂. In sulfuric acid leaching, maximum recovery of niobium was 94.3%, achieved in one hour with a high concentration and high consumption of the acid. In the second process involving leaching of niobium sulfate from the cake produced by heating a mixture of concentrate and sulfuric acid, maximum niobium recovery was 93.5-93.9% at acid: concentrate ratios of 1.46-1.52. In the decomposition of rich pyrochlore concentrates with hydrofluoric acid, the

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ACCESSION NR: AP5016347

acid concentration was varied from 5 to 40% and temperature from 20 to 70°C. Optimum recovery of niobium--99%--was obtained by heating the comminuted concentrate with a 15% hydrofluoric acid solution at 70°C for one hour. In the final process, poor zirconium-pyrochlore concentrates were briquetted with 14-20% carbon and chlorinated in a quartz tube at temperatures between 400 and 800°C. Maximum recovery of niobium--98%--in chlorides was obtained at a temperature of 600°C. Process time was 4 hours and chlorine consumption was 5 liters per hour. At the same time, zirconium recovery increased with the temperature. Chlorides obtained in this process may be hydrolyzed to yield niobium concentrates or utilized for extrusion of metal niobium after appropriate purification. Orig. art. has: 2 tables.

ASSOCIATION: Ukrgiprotsvetmet

SUBMITTED: 21Oct63

ENCL: 00

SUB CODE: MM,GC

NO REF SOV: 004

OTHER: 001

Card 2/2

SOROKIN, I.P.; STEENILOVA, N.N.; ORLOVA, G.M.

Dissolution of germanium in hydrochloric acid solutions of
potassium dichromate. Vest. LGU 20 no.16:119-122 '65.
(MIRA 18:9)

L 6968-66 EWT(m)/EWP(j)/T/EWP(t)/EWP(b)/EWA(c) JD/RM
ACC NR: AP5028202 SOURCE CODE: UR/0079/65/035/009/1512/1517

AUTHOR: Stremilova, N. N.; Sorokin, I. P.; Orlova, G. M. 55 55 55 40
39
B

ORG: Leningrad State University (Leningradskiy gosudarstvennyy universitet) 55

TITLE: Dissolution kinetics of single-crystal germanium in hydrochloric acid solutions of ferric chloride 14 55, 27

SOURCE: Zhurnal obshchey khimii, v. 35, no. 9, 1965, 1512-1517

TOPIC TAGS: solution kinetics, germanium single crystal, iron compound, hydrochloric acid, chloride, germanium compound

ABSTRACT: The dissolution of n-type single crystal germanium disks 10 mm in diameter and 1 mm thick, with their large surface oriented parallel to the (111) plane, was studied in 7.0 M hydrochloric acid solutions containing 0.02 to 2.66 moles FeCl₃. It was shown that in 0.33 to 2.66 M FeCl₃ solutions in 7.0 M HCl, the dissolution rate of germanium is determined by the rate of the heterogeneous chemical reaction of oxidation of germanium. In 0.02 M FeCl₃ in 7.0 M HCl, the dissolution rate is determined by the rate of diffusion. The decrease in the dissolution rate of 4

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UDC: 546.289.131 + 546.8
09011705

L 6968-66

ACC NR: AP5028202

germanium in the FeCl_3 concentration range from 0.6 to 1.4 M HCl apparently results from the formation of complex compounds between FeCl_3 and HCl. The variation of the dissolution rate with the content of free HCl goes through a maximum around 6 M HCl, probably because of the change in the solubility of germanium tetrachloride associated with rising HCl concentration. Orig. art. has: 6 figures, 1 table, and 1 formula.

SUB CODE: GC,SS/ SUBM DATE: 02Jul64/ ORIG REF: 008/ OTH REF: 004

bel
Card 2/2

ACC NR: AP6003616

SOURCE CODE: UR/0054/65/000/003/0119/0122

AUTHOR: Sorokin, I. P.; Stremilova, N. N.; Orlova, G. M. 57

ORG: Leningrad State University (Leningradskiy gosudarstvennyy universitet) 13

TITLE: Dissolution of germanium²¹ in hydrochloric acid solutions of potassium dichromate

SOURCE: Leningrad. Universitet. Vestnik. Seriya fiziki i khimii, no. 3, 1965, 119-122

TOPIC TAGS: germanium, potassium compound, hydrochloric acid, activation energy, etched crystal, solution kinetics, germanium single crystal

ABSTRACT: The solution kinetics of germanium in 7M HCl solutions containing $K_2Cr_2O_7$ in amounts of 0.02, 0.1² and 0.31 mol/l were studied at 20-80°C on *n*-type Ge single crystal discs with the large surface oriented along the (111) plane. The solution rate of Ge(*w*) was determined gravimetrically and was calculated from the equation

$$w = \frac{1}{72.6t} \cdot \frac{p_1 - p_2}{\pi D \left(\frac{D}{2} + h \right)}$$

UDC: 546.289 : 532.73

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L 11209-66

ACC NR: AP6003616

where p_1 and p_2 are the initial and final weights of $Ge(g)$, D and h are the diameter and thickness of the disc (cm), and t is the time of the experiment. The solution rate increases with the stirring rate in 0.17 and 0.31 M $K_2Cr_2O_7$ solutions in 7M HCl. The activation energy of solution E was found from the linear dependence of $\log w$ on $1/T$, and the preexponential factor C_e in the equation

$$w = C_e e^{-E/RT}$$

was obtained. The solution rate increases in direct proportion to the potassium bichromate concentration over the entire temperature range. The dependence of the solution rate on stirring and the low values of the activation energy (less than 10 kcal/mol) indicate that the solution rate is determined by the rate of diffusion of the oxidant toward the surface of the sample. Orig. art. has: 5 figures.

SUB CODE: 07/ SUBM DATE: 20Nov64/ ORIG REF: 003/ OTH REF: 005

TS
Card 2/2

SOROKIN, I.P.; KOLITSOV, Yu.I.; SERGIYENKO, I.V.; PETRIK, I.S.

Niobium recovery from collective zircon-pyrochlore concentrates.
Izv.vys.ucheb.zav.; tsvet.met. 8 no.2:96-100 '65. (MIRA 19:1)

1. Ukrainskiy gosudarstvennyy proyektnyy institut tsvetnoy
metallurgii. Submitted October 21, 1965.

ACC NR: AP7002739

(N)

SOURCE CODE: UR/0126/66/022/005/0890/0835

AUTHOR: Zel'dovich, V. I.; Sadovskiy, V. D.; Sorokin, I. P.

ORG: Institute of Metal Physics, AN SSSR (Institut fiziki metallov AN SSSR)

TITLE: Dilatometric anomalies in textured alloys during $\alpha \rightarrow \gamma$ transformation

SOURCE: Fizika metallov i metallovedeniye, v. 22, no. 6, 1966, 890-895

TOPIC TAGS: dilatometric anomaly, ferronickel alloy, ferromanganese alloy, austenite transformation, martensitic transformation / N12 ferronickel alloy, N15 ferronickel alloy, N23 ferronickel alloy, N28 ferronickel alloy, N32 ferronickel alloy, N27T2 Fe-Ni-Ti alloy, G7 ferromanganese alloy, G14 ferromanganese alloy

ABSTRACT: In textured Fe-Ni alloy the change in volume during $\alpha \rightarrow \gamma$ transformation of the martensitic type occurs nonisotropically. In particular, the transformation is accompanied by elongation of the alloy in the direction of the axis of texture although the specific volume of the γ -phase is smaller than that of the α -phase. In a statistically isotropic alloy the extent of the dilatometric (linear) effect during transformation reaches one-third of the volume effect; the same ratio exists between the linear and volume effects of transformation in an anisotropic material if the phase transition occurs in a crystallographically disordered manner. Any

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1/3

UDC: 669.15:[539.37 + 536

ACC NR: AP7002739

deviation from this ratio is termed a dilatometric anomaly (Zel'dovich, V. I., Sorokin, I. P. FMM, 1966, 21, 223). The difference between the dilatometric effect of the transformation of a textured (deformed) alloy versus that of a statistically isotropic (nondeformed) alloy represents the measure of the dilatometric anomaly, on taking into account the amount of the transforming phase. In this connection, on the basis of an analysis of dilatometric anomalies and changes in texture due to $\alpha \rightarrow \gamma$ transformation, as well as on the basis of the change in transformation temperature owing to prior plastic deformation (92% reduction in area), the nature of $\alpha \rightarrow \gamma$ transformation during continuous heating is discussed with respect to N23, N28, N32 and N27T2 ferronickel alloys and G7 and G14 ferromanganese alloys. The temperatures at the beginning and end of the transformation were taken as the temperatures at which the dilatometric curve began to markedly deviate from its rectilinear course. The dilatometric curves were plotted with the aid of a differential optical dilatometer, and the phase composition was determined by the magnetometric method. Findings: in ferronickel alloys with a low Ni content -- N12 (12.0% Ni), N15 (15.1% Ni), N23 (23.1% Ni) -- the decisive role in transformation is played by diffusion processes (the austenite texture becomes dispersed to a much greater extent), whereas in the alloys with a higher Ni content the martensitic mechanism is largely responsible for this transformation. The addition of Ti (1.9%) to the alloy with 27% Ni (N27T2) inhibits the recrystallization of austenite and the development of disordered diffusion processes during transformation. This may be a definite factor in enhancing the strength of Fe-Ni-Ti alloys

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ACC NR: AP7002739

owing to phase strain hardening compared with Fe-Ni alloys. In ferromanganese alloys the initial temperature of $\alpha \rightarrow \gamma$ transformation markedly decreases under the influence of deformation, which points to a diffusion mechanism of $\alpha \rightarrow \gamma$ transformation in these alloys during their continuous heating. Orig. art. has: 2 tables, 2 figures.

SUB CODE: 13, 20/ SUBM DATE: 20Apr66/ ORIG REF: 007/ OTH REF: 002

Card 3/3

SOROKIN, I.S.; TISHCHENKO, D.V.

Isolation of levoglucosan from soluble tar. *Gidroliz.i lesokhim.*
prom. 15 no.3:8-9 '62. (MIRA 15:5)

1. Leningradskaya lesotekhnicheskaya akademiya im. S.M.Kirova.
(Levoglucosan) (Wood tar)

SOROKIN, I.S.

SUVOROV, I.F.; SOROKIN, I.S., redakter; GUBER, A., tekhnicheskiy redakter.

[Course in higher mathematics for technical schools] Kurs vysshei matematiki dlia tekhnikov. Izd. 3-e. Moskva, Gos. izd-vo "Sovetskaya nauka", 1956. 351 p.
(Mathematics)

(MLRA 9:4)

SOROKIN, I.S.; TISHCHENKO, D.V.

Water-soluble novolaks of pyrocatechol in the acid liquor of
the gazification of coniferous wood. Gidroliz. i lesokhim. pr. 17
17 no.1:15-17 '64. (MIRA 17:4)

1. Leningradskaya lesotekhnicheskaya akademiya imeni S.M.Kirova.

SUVOROV, I.F.; SOROKIN, I.G., red.; ROZANOVA, G.K., red.; TITOVA, L.L.,
tekhn.red.

[Textbook of higher mathematics for engineering schools] Kurs
vysshei matematiki dlia tekhnikumov. Izd.5. Moskva, Gos.izd-vo
"Vysshiaia shkola," 1960. 351 p. (MIRA 13:9)
(Mathematics--Textbooks)

SOROKIN, I. V. Cand. Physicomath. Sci.

Dissertation: "Investigation of X-Ray Spectra of Manganese and Aluminum in Alloys of These Two Metals." Moscow Order of Lenin State U. imeni M. V. Lomonosov, 9 Apr. 1947.

SO: Vechernyaya Moskva, Apr, 1947 .(Project #17836)

BYKOV, V.P.; SOROKIN, I.V.

X-ray spectroscopic fluorescence analysis of raw ores. Zav.lab. 27
no.11:1371-1374 '61. (MIRA 14:10)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut mineral'nogo syr'ya.
(Ores-Spectra)

SOROKIN, I.V., nauchnyy sotrudnik

Effectiveness of specific measures for the control of hog cholera.
Veterinariia 37 no.10:35-38 0 '60. (MIRA 15:4)

1. Laboratoriya ekonomiki veterinarii Gosudarstvennogo nauchno-
kontrol'nogo instituta veterinarnykh preparatov Ministerstva
sel'skogo khozyaystva SSSR.
(Hog cholera) (Vaccination)

BYKOV, V.P.; SOROKIN, I.V.

X-ray spectral analysis of raw minerals. Zav. lab. 29 no.9:
1074-1076 '63. (MIRA 17:1)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut mineral'nogo
syr'ya.

L 45455-65 EWA(k)/EWT(1)/EEC(t) IJP(c) LHB
S/0120/65/000/001/0185/0188

ACCESSION NR: AP50C7054

AUTHOR: Bykov, V. P.; Sorokin, I. V.; Avdonin, A. S.; Zaytsev, V. S.

TITLE: X-ray automatic spectrometer for analytical purposes

SOURCE: Pribory i tekhnika eksperimenta, no. 1, 1965, 185-188

TOPIC TAGS: spectrometer, x ray spectrometer, automatic spectrometer

ABSTRACT: The spectrometer permits assaying a number of specimens for a specified element automatically. It is intended for quantitative analysis of two groups of elements having numbers from 29 (Cu) to 42 (Mo) and from 71 (Lu) to 92 (U). The spectrometer comprises three parts: the spectrometer proper, a h-v supply unit, and a radiometric unit. These design features are claimed to be original: a mechanism for automatically changing radiators; an electronic control unit; and a two-slit device in front of the counter which permits using the conventional technique of x-ray spectral analysis. A BKhV-2 x-ray tube serves as a

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L 45455-65

ACCESSION NR: AP5007054

source of primary radiation; eight movable secondary radiators are used. One of the two slits is adjusted to the analytical line of the sought-for element, and the second slit, to the line of the internal-standard element or it may serve for background-noise measurements. A vibrating shutter opens and closes each slit at a frequency of 100 times per min. The sensitivity of quantitative analysis is claimed to be 0.002--0.05%. Orig. art. has: 3 figures and 1 table.

ASSOCIATION: VNII Mineral'nogo syr'ya (All-Union Scientific Research Institute of Crude Minerals)

SUBMITTED: 17Jan64

ENCL: 00

SUB CODE: OP

NO REF SOV: 000

OTHER: 000

Card 2/2

L 01211-67 EWT(l)/EWP(c)/EWT(m)/EWP(l)/EFL IJP(c) JD/WW/WH
ACC NR: AP6031032 SOURCE CODE: UR/0109/66/011/009/1674/1681

56
B

AUTHOR: Moyzhes, B. Ya.; Petrov, I. N.; Sorokin, I. V.; Sher, E. M.

ORG: none

TITLE: Measurement of the heat conductivity of an oxide coating at operating temperatures of the cathode

SOURCE: Radiotekhnika i elektronika, v. 11, no. 9, 1966, 1674-1681

TOPIC TAGS: heat conductivity, oxide coating, cathode coating

ABSTRACT: A procedure is developed for measuring the heat conductivity coefficient of porous oxide coatings (κ_{ox}) transparent for heat radiation at the operating temperature of the cathode ($\sim 1000K$). For layers deposited by spraying, κ_{ox} was found to be within $(1.5--8) \cdot 10^{-6}$ w/cm degrees. The low heat conductivity promotes substantial preheat of the oxide layer, especially with pulsed pickoff of current from the cathode. A comparison was made of κ_{ox} values obtained with this procedure with the measurement made on the same specimen at a temperature close to room temperature and the results are given. Orig. art. has: 5 figures, 3 tables, 11 formulas and 4 bibliographic references. [Authors' abstract] [DW]

SUB CODE: SUBM DATE: 31Mar65/ORIG REF: 002/ OTH REF: 002/
Card 1/1 big UDC: 621.385.735:536.2.08

SOROKIN, I.Ya.

Ten years of work of a feldsher-midwife station. Fel'd. i akush.
22 no.2:35-38 F '57 (MIRA 10:5)

1. Zaveduyushchiy Pochepskim fel'dshersko-akusherskim punktom
Davydovskogo rayona Voronezhskoy oblasti.
(POCHEPSKOYE---MEDICINE, RURAL)

Sorokin, I. Ye.

SOROKIN, I. Ye., prof.

~~"Principles of pulmonary tuberculosis therapy"~~ by V.L. Einis.
Reviewed by I.E. Sorokin. Probl. tub. 34 no. 5: 69-70 8-0 '56.
(TUBERCULOSIS) (EINIS, V.L.) (MIRA 10:11)

SOROKIN, Konstantin Alekseyevich; OSIPOVICH, F.A., red.; EBERLIN, K.Z.,
red.izd-va; SALAZKOV, N.P., tekhn.red.

[Planning and establishing norms for overhead expenses in ship
repairing enterprises] Planirovanie i normirovanie nakladnykh
raskhodov sudoremontnykh predpriatii. Moskva, Izd-vo "Rechnoi
transport," 1957. 179 p. (MIRA 11:1)

(Ships--Maintenance and repair--Cost)

SOROKIN, K.F.; BLASHKEVICH, R.N.; MYATLEVA, A.L.; OSEDELETS, Z.M.;
red. izd-va; GERASIMUK, L.A.; tekhn. red.; TEMKINA, Ye.L.,
tekhn. red.

[Kitchens, bathrooms, and built-in furniture; examples from
abroad] Kukhni, sanitarnye uzly i vstroennaya mebel'; zaru-
beznyi opyt. Moskva, Gosstroizdat, 1962. 148 p.
(MIRA 15:9)

(Built-in furniture) (Bathrooms)

SOROKIN, K.N.

Capacity for glycolytic metabolism in the microsomes of Ehrlich's
aseptic cancer cells. TSitologiya 4 no.3:325-328 My-Je '62. (MIRA 16:3)

1. Otdel biokhimii Instituta eksperimental'noy meditsiny Akademii
meditsinskikh nauk SSSR, Leningrad. (CANCER)
(GLYCOLYSIS)

SOROKIN, K.N.

Distribution of hexokinase in Ehrlich's ascites cancer cells. Biokhimiia
27 no.1:105-108 Ja-F '62. (MIRA 15:5)

1. Institute of Experimental Medicine, Academy of Medical Sciences
of the U.S.S.R., Leningrad.
(CANCER) (HEXOKINASES)

SOROKIN, K.N.

Enzymatic links determining the glycolysis rate in the microsomes
of the Ehrlich ascitic cancer cells. Biokhimiia 28 no.1:18-21
Ja-F '63. (MIRA 16:4)

1. Biochemical Department, Institute of Experimental Medicine,
Academy of Medical Sciences of the U.S.S.R., Leningrad.
(ENZYMES) (GLYCOLYSIS) (CANCER)

7

ca

Influence of the increase in current strength on the quality of welding. V. V. Butsky and L. A. Sushkin. *Arbogornye Dela* 1936, No. 10, 27-30. Samples of metal welded with electrodes covered with a chalky coating, contg. C 0.22, Mn 0.58, Si 0.20, P 0.03 and S 0.003%, with coating No. 1051, contg. C 0.25, Mn 0.63, Si 0.14, P 0.007 and S 0.0003%, at 220-450 amp., showed an improved quality of welding as shown by the chem. analysis of the metal seam. The N₂ content at 150 amp. was 0.124 and at 450 amp. 0.050%. Mech. properties of the metal in the seam are also improved with the increase of the current strength. A. A. Podgorniy

ASIS-ALA METALLURGICAL LITERATURE CLASSIFICATION

SOROKIN, L.A.

Metal ✓ The Joint Stresses in the Steel Structure and the Lining of Blast Furnaces. L. A. Sorokin. (Stal', 1955, (8), 698-703). [In Russian]. An analysis of stresses set up by the different behaviours of the steel shell, coolers, and lining of a blast furnace is carried out, and the equations obtained are applied to blast-furnace design problems. A design in which diffusion of zinc vapours into the lining is avoided by the use of compressed gas is described.—S. K.

State Polytech Inst. "Proyektstal'kamatuktsiya"

SOV/137-58-11-22061

Translation from: Referativnyy zhurnal, Metallurgiya, 1958, Nr 11, p 32 (USSR)

AUTHOR: Sorokin, L. A.

TITLE: An Investigation of the Stress Distribution in the Blast-furnace
Hearth Jacket (Issledovaniye napryazhennogo sostoyaniya kozhukha
gorna domennykh pechey)

PERIODICAL: V sb.: Materialy po stal'n. konstruktsiyam. Nr 1. Moscow, 1957,
pp 146-164

ABSTRACT: The major factors determining the distribution and magnitude of stresses in blast-furnace hearth jackets and brickwork are revealed. It is determined that tensile annular (circumferential) and vertical stresses develop in the hearth-bottom jacket, and that in places these exceed the proportional limit. Coefficients of deformability of the lining and the bulk material used to calk spaces between the cooling plates are determined, as is the calculated value of the modulus of elastic plasticity of fireclay brickwork. Measures are developed to improve the designs of blast-furnace jackets, with the purpose of increasing their service lives. Specific undertakings are planned for further investigations of the functioning of blast-furnace jackets & brickwork.

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M. M.

SOROKIN, L. A.: Master Tech Sci (diss) -- "Investigation of the stressed state of the furnace shell of a blast furnace". Moscow, 1958. 18 pp (Min Higher Educ USSR, Moscow Order of Labor Red Banner Construction Engineering Inst im V. V. Kuybyshev), 150 copies (KL, No 1, 1959, 121)

3. Referred--Mathematical analysis

SOV/137-58-8-16463

Translation from: Referativnyy zhurnal, Metallurgiya, 1958, Nr 8, p 33 (USSR)

AUTHOR: Sorokin, L.A.

TITLE: Operational Stresses in Blast-furnace Casings Surrounding the Well and the Hearth of the Furnace (Rabota kozhukha leshchadi i gorna domennoy pechi)

PERIODICAL: V sb.: Domennoye proiz-vo Moscow, Metallurgizdat, 1958, pp 75-83

ABSTRACT: Stresses occurring in armor casings of blast furnaces were evaluated by the personnel of the GPI Proyektstal'-konstruktsiya by means of measuring the deformations in three different directions within the plane of the casing (at angles of 0°, 45°, and 90°) in accordance with plane stresses in the casing. For this purpose a special, portable tension gage was designed with a temperature-compensated standard which prevented the device from being affected by temperature changes. Investigations of the operation of blast-furnace casings, performed on four levels of blast furnaces (Nr 4 at the "Azovstal'" plant and Nr 1 at the Novo-Lipetsk plant) prior to their firing, within 30 days after firing, and three to four months thereafter,

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